

Table 4
Summary Effluent Limit
Calculation and Comparison⁸

	units	Applicable Criteria			Effluent Limits based on Human Health			Effluent Limits based on Aquatic Life				
		Acute	Chronic	Human Health	ECA ¹	Average Monthly ² (ug/L)	Maximum Daily ³ (ug/L)	LTAacute ⁴	LTAchronic ⁵	Minimum LTA	Maximum Daily ⁷ (ug/L)	Average Monthly ⁸ (ug/L)
CTR CONSTITUENTS												
Tetrachloroethylene (PCE)	ug/L	n/a	n/a	0.8	0.8	0.8	1.61	n/a	n/a	n/a	n/a	n/a
1,1-DCA	ug/L	n/a	n/a	5	5	5	10.05	n/a	n/a	n/a	n/a	n/a
1,2-DCA	ug/L	n/a	n/a	0.38	0.38	0.38	0.76	n/a	n/a	n/a	n/a	n/a
1,1-DCE	ug/L	n/a	n/a	0.057	0.057	0.057	0.11	n/a	n/a	n/a	n/a	n/a
1,1,1-TCA	ug/L	n/a	n/a	200	200	200	402.00	n/a	n/a	n/a	n/a	n/a
1,1,2-TCA	ug/L	n/a	n/a	0.6	0.6	0.6	1.21	n/a	n/a	n/a	n/a	n/a
Chloroform	ug/L	2890	1240	1.1	1.1	1.1	2.21	927.69	653.48	653.48	2032.3228	1012.894
TCE	ug/L	n/a	n/a	2.7	2.7	2.7	5.43	n/a	n/a	n/a	n/a	n/a
Methylene Chloride	ug/L	n/a	n/a	2.5	2.5	2.5	5.03	n/a	n/a	n/a	n/a	n/a
NON-CTR CONSTITUENTS												
Trichlorofluoromethane	ug/L	n/a	n/a	150	150	150	301.50	n/a	n/a	n/a	n/a	n/a

¹ ECA = Effluent Concentration Allowance = Most stringent water quality objective (WQO) or criteria when dilution is not considered

² For Human Health the Average Monthly Effluent Limit (AMEL) = ECA

³ For Human Health the Maximum Daily Effluent Limit (MDEL) = AMEL * (multiplier) for this Order the multiplier is 2.01 using a default CV=0.6

⁴ LTA_{acute} = ECA * (multiplier) for this Order the multiplier is 0.321

⁵ LTA_{chronic} = ECA * (multiplier) for this Order the multiplier is 0.527

⁶ For Aquatic Life the Average Monthly Effluent Limit (AMEL) = Minimum LTA * (multiplier) for this Order the Multiplier is 3.11 assuming default n=4 and CV=0.6

⁷ For Aquatic Life the Maximum Daily Effluent Limit (MDEL) = Minimum LTA * (multiplier) for this Order the Multiplier is 1.55 assuming default n=4 and CV=0.6

⁸ SIP, Section 1.4 Effluent Limit Calculation Equations and definitions provided on page two or this table.

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Section 1.4 of the SIP equations for determining Effluent Limitations:

$$ECA = C + D (C - B) \text{ when } C > B, \text{ and}$$

$$ECA = C \text{ when } C \leq B$$

Where:

ECA – Effluent concentration allowance

C = the priority pollutant criterion/objective or WQO/WQC;

D = the dilution credit (for this analysis D=0); and

B = the ambient background concentration

$$AMEL_{\text{human health}} = ECA$$

$$MDEL_{\text{human health}} = ECA * MDEL/AMEL \text{ multiplier (from Table 2)}$$

$$LTA_{\text{acute}} = ECA_{\text{acute}} * ECA \text{ multiplier}_{\text{acute}99} \text{ (from Table 1)}$$

$$LTA_{\text{chronic}} = ECA_{\text{chronic}} * ECA \text{ multiplier}_{\text{chronic}99} \text{ (from Table 1)}$$

$$AMEL_{\text{aquatic life}} = LTA * AMEL \text{ multiplier}_{95} \text{ (from Table 2) utilizing most stringent LTA}$$

$$MDEL_{\text{aquatic life}} = LTA * MDEL \text{ multiplier}_{99} \text{ (from Table 2) utilizing most stringent LTA}$$

Where:

LTA=Long Term Average

AMEL= Average Monthly Effluent Limitation

MDEL=Maximum Daily Effluent Limitation